REMARKS

Claims 1-9 and 11-34 remain pending. Applicants gratefully acknowledge the Examiner's allowance of Claims 6-9 and 12-34.

Claims 1, 2, and 5 stand finally rejected under 35 USC 102(b) as allegedly being anticipated by Harsh. The disclosure of Harsh, however, fails to support the rejections.

The Patent Office cites the processing method shown in FIGS. 2 and 4 in Harsh to support its contention of anticipation. FIG. 4 in Harsh illustrates the processing steps to transfer MEMS device initially fabricated on a host substrate (represented by a shaded box) to a target substrate (represented by a blank box). Referring to illustration for step 1, the MEMS device to be transferred is formed on the host substrate and is initially embedded in a SiO2 layer. At the step 4, the host substrate is fixed to the target substrate by epoxy. At this point, the SiO2 layer is obviously located in the space between the host and target substrates and is in direct contact with the MEMS device. At step 5, Harsh performs an etching process to remove the SiO2 layer with an etching chemical HF. This releases the MEMS device from the host substrate. During this step, the target substrate, the MEMS device, and the bonding joints between the MEMS device and the target substrate are exposed to the etching chemical (HF). This is because the MEMS

device is embedded in the SiO2 layer and hence the MEMS device must be exposed to HF when the SiO2 layer is etched away by using HF as the etching chemical. Next, at step 6, the host substrate is removed to complete the transfer of the MEMS device to the target substrate.

In stark contrast, Claims 1, 2, and 5 recite "causing said joints and said device wafer to be isolated from exposure to an etching chemical." This is completely different from the processing step 5 in Harsh. This difference is significant. For example, as stated in the paragraph [0016] on pages 5-6 in the specification, this isolation protects the bonding between the membrane to be transferred and the device wafer, and allows for a variety of bonding materials to be used. In addition, other structures or elements fabricated on the device wafer are also isolated from the etching chemical. This isolation reduces any adverse impact on such structures or elements on the device wafer caused by the etching chemical. Harsh certainly does not recognize these technical issues and associated advantages of the present invention. In absence of the recognitions, Harsh fails to disclose the unique transfer methods of Claims 1, 2, and 5.

The final Office Action contends that "both the device wafer and joints are not influenced from exposure to an etching chemical as evidence by no removal of the device wafer or joint"

at page 5, lines 5-6. Also, the final Office Action alleges that the joints on the device in Harsh are "inherently isolated from exposure to an etching chemical" (lines 15-19 on page 2). Such conclusory statements lack support from the disclosure of Harsh and thus fail to meet the burden of a prima facie showing of anticipation required by 35 USC 102(b).

In Harsh, the MEMS device is embedded within the SiO2 layer (first illustration in FIG. 4). As such, the MEMS device is in direct contact with the SiO2 layer. Therefore, etching the SiO2 layer with HF will unavoidably expose the MEMS device, or at least the portions of the MEMS device in contact with the SiO2 layer, to the HF when the SiO2 layer is etched away. The last two illustrations in FIG. 4 in Harsh clearly show this aspect of the Harsh process.

Harsh specifically acknowledges that the MEMS device itself is exposed to the etching chemical HF. In the second column on page 276 in Harsh, Harsh points out a dilemma in his transfer method between leaving the MEMS device in the etchant (HF) too long to result in over etching, and leaving it in the etchant (HF) for too short a time to cause some residual of SiO2. In both cases, the MEMS device can be damaged. Harsh proposes a partial pre-release step before bonding in that part of the description to reduce the damage. This pre-release step,

however, still does not isolate the MEMS device from the etching chemical HF.

Therefore, Harsh's own teaching unambiguously contradicts with the Patent Office's assertion that Harsh's transfer method can inherently isolate the MEMS device from exposure to an etching chemical.

In view of the above, Applicants respectfully submit that the Patent Office has not made a prima facie showing in its final Office Action. Claims 1, 2, and 5 are distinctly different from Harsh and are patentable over Harsh under 35 USC 102(b).

Claims 3, 4, and 11 stand rejected under 35 USC 103(a) as allegedly being obvious over Harsh alone or in view of either or both Bowers and Aigner. Applicants respectfully traverse.

As discussed above, Harsh, cited as the primary reference, fails to disclose each feature of Claim 1. Since Claims 3, 4, and 11 are dependent on Claim 1, Harsh also fail to disclose each feature of Claims 3, 4, and 11. Bowers and Aigner each certainly do not cure the void in the disclosure of Harsh based on the specific combinations suggested in the final Office Action. Accordingly, Claims 3, 4, and 11 are patentable under 35 USC 103(a).

In summary, Claims 1-5 and 11 are distinctly patentable over cited prior art. All pending claims should be allowed.

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Accordingly, the application is now in full condition for allowance and an official notice to this effect is respectfully solicited.

The undersigned invites the Examiner for a telephone call should such a telephone call be helpful in resolving any outstanding issues in this application.

This response is filed timely because the 3-month date of February 28 was a Saturday. No fee is believed to be due. Please apply any applicable charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

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